

1 **What is claimed is:**

2 1. A nail-driving tool comprising:

3 a head;

4 a cylinder mounted in the head and comprising a chamber defined by
5 an inner peripheral wall and an end wall, the end wall including a
6 through-hole, the inner peripheral wall including plural ports
7 communicated with outside;

8 a piston reciprocatingly received in the chamber of the cylinder;

9 a driving element securely attached to the piston to move therewith,
10 the driving element extending through the through-hole of the end wall;

11 a bumper comprising a first bumper section and a second bumper
12 section made of a material having a rigidity different from that of the first
13 bumper section, the driving element extending through the bumper;

14 wherein when in a driving stroke of the piston toward the bumper, air
15 in the chamber exits the cylinder via the ports of the cylinder.

16 2. The nail-driving tool as claimed in claim 1, wherein the first bumper
17 section is more rigid than the second bumper section, the second bumper
18 section comprising an enlarged end section that abuts against the end wall,
19 an annular connecting wall being defined between the end wall and the
20 inner peripheral wall, the enlarged end section of the second bumper
21 section being securely received in a space defined by the annular
22 connecting wall.

23 3. The nail-driving tool as claimed in claim 2, wherein the annular
24 connecting wall has a general plane located at a level different from that of
25 the inner peripheral wall of the cylinder, thereby defining a gap between
26 the inner peripheral wall of the cylinder and the bumper.

- 1 4. The nail-driving tool as claimed in claim 1, further comprising means for
2 driving the piston, said piston-driving means being one of pressurized air
3 and inflammable gas.
- 4 5. The nail-driving tool as claimed in claim 1, wherein the head comprises
5 plural ports in an end thereof to allow communication between the
6 chamber of the cylinder and outside.
- 7 6. The nail-driving tool as claimed in claim 1, wherein the bumper has a
8 portion not in contact with the inner peripheral wall of the cylinder to
9 thereby defining a gap between the inner peripheral wall of the cylinder
10 and the bumper, the gap allowing exit of the air in the chamber via the
11 ports in the cylinder and allowing entrance of ambient air into the chamber
12 of the cylinder via the ports in the cylinder.
- 13 7. The nail-driving tool as claimed in claim 6, wherein the first bumper
14 section is more rigid than the second bumper section, the second bumper
15 section comprising an enlarged end section that abuts against the end wall,
16 an annular connecting wall being defined between the end wall and the
17 inner peripheral wall, the enlarged end section of the second bumper
18 section being securely received in a space defined by the annular
19 connecting wall.
- 20 8. The nail-driving tool as claimed in claim 6, wherein the annular
21 connecting wall has a general plane located at a level different from that of
22 the inner peripheral wall of the cylinder, thereby defining the gap between
23 the inner peripheral wall of the cylinder and the bumper.
- 24 9. The nail-driving tool as claimed in claim 6, further comprising means for
25 driving the piston, said piston-driving means being one of pressurized air
26 and inflammable gas.

- 1 10. The nail-driving tool as claimed in claim 6, wherein the head comprises
2 plural ports in an end thereof to allow communication between the
3 chamber of the cylinder and outside.
- 4 11. The nail-driving tool as claimed in claim 7, wherein the gap is defined
5 between the second bumper section and the inner peripheral wall of the
6 cylinder.
- 7 12. The nail-driving tool as claimed in claim 11, wherein the annular
8 connecting wall has a general plane located at a level different from that of
9 the inner peripheral wall of the cylinder, thereby defining the gap between
10 the inner peripheral wall of the cylinder and the bumper.
- 11 13. The nail-driving tool as claimed in claim 11, further comprising means for
12 driving the piston, said piston-driving means being one of pressurized air
13 and inflammable gas.
- 14 14. The nail-driving tool as claimed in claim 11, wherein the head comprises
15 plural ports in an end thereof to allow communication between the
16 chamber of the cylinder and outside.
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